122989 NHTSA-00-8572-11

The *RUN SAFE™ SYSTEM*

What is the *Run Safe™ System?*

- The ***Run Safe™*** System is an Electronic Tire Pressure Monitoring System.
- The system consists of tire pressure sensors, a driver receiver display unit and antenna.

How does it work?

- A pressure Sensor is placed on each tire valve stem of the vehicle.
- The Sensor measures and records the tire pressure (PSI).
- The Sensor uses RF (digital wireless) communications to report changes in tire PSI.
- The receiver display unit receives the communication from the pressure sensor and reports them to the driver on the in cab display.

What are the *Run Safe* advantages?

- Early warning of tire related problems (Low PSI and High PSI).
- Low cost effective system to protect your investment.
- Improved safety and performance when tires are properly inflated.
- Improved tire wear when tires are properly inflated.
- Improved fuel economy when tires are properly inflated.
- Easy to install and maintain.

Why?

- It is estimated that 40 - 50% of all tires operating today are under-inflated.
- Under-inflated tires run hotter, increase rolling resistance, decrease fuel economy and wear faster.
- Avoid road side service calls or damage caused by tire failures.

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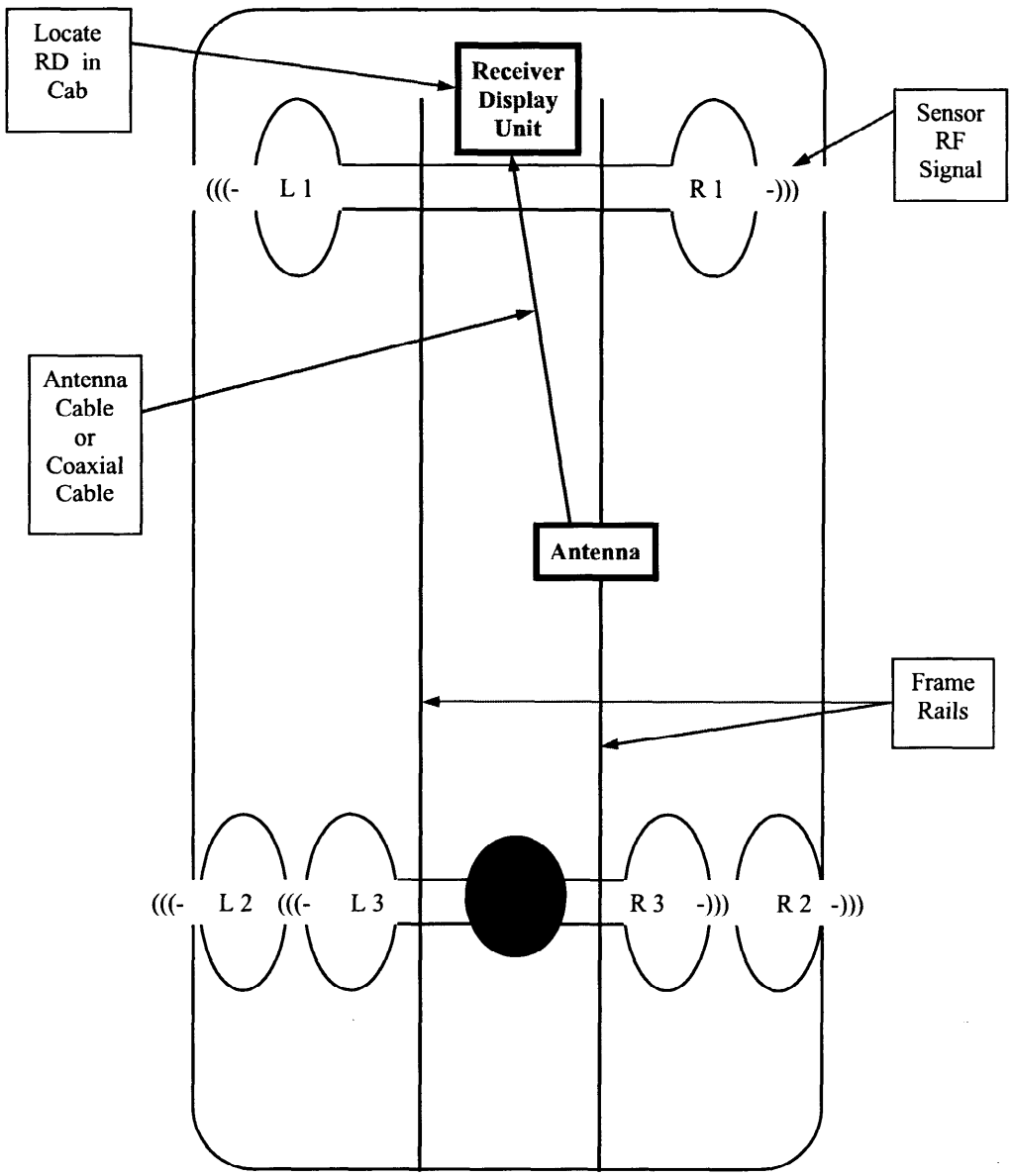
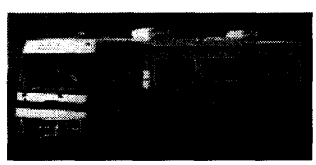
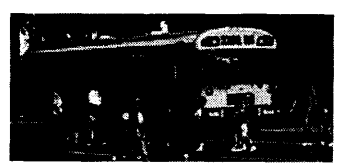
SENSOR TECHNOLOGY INTERNATIONAL

***RUN SAFE™* SYSTEM**







SIX WHEEL APPLICATION (K6)

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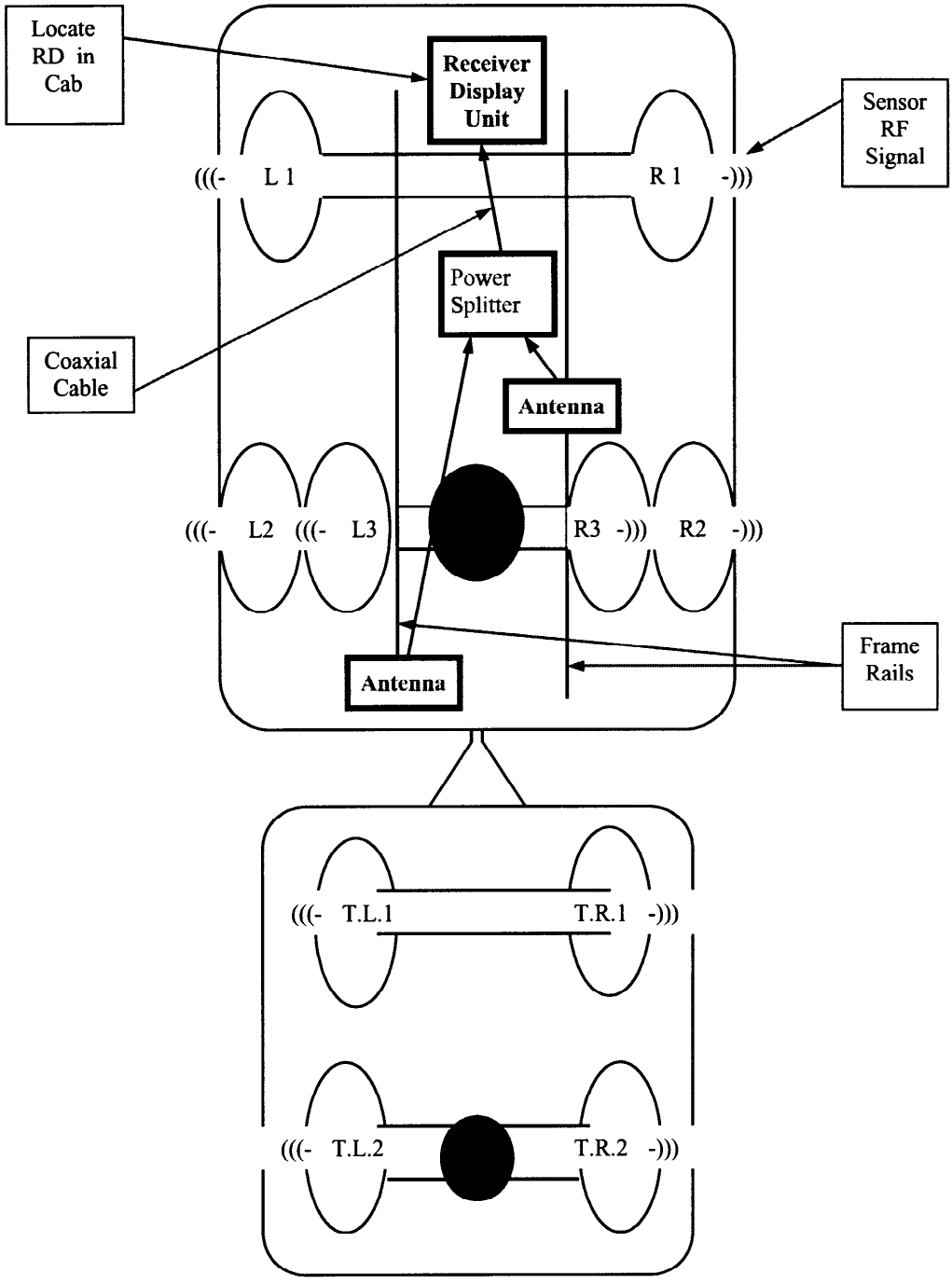
***RUN SAFE™* SYSTEM**



SIX WHEEL APPLICATION with TOW PACKAGE (K10S -T)

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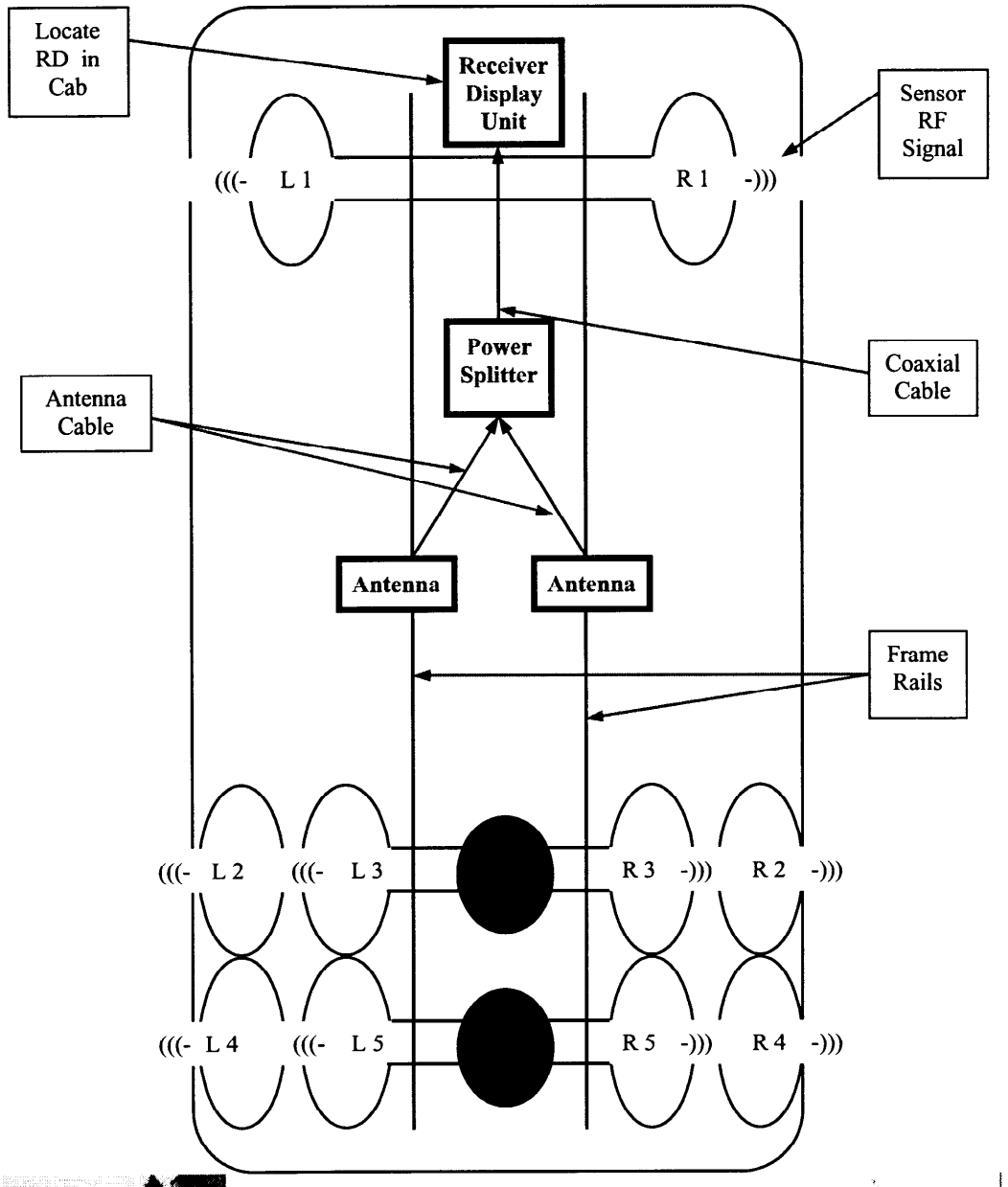
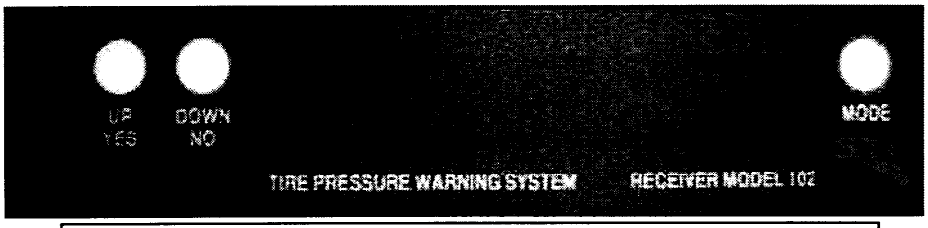
***RUN SAFE*™ SYSTEM**

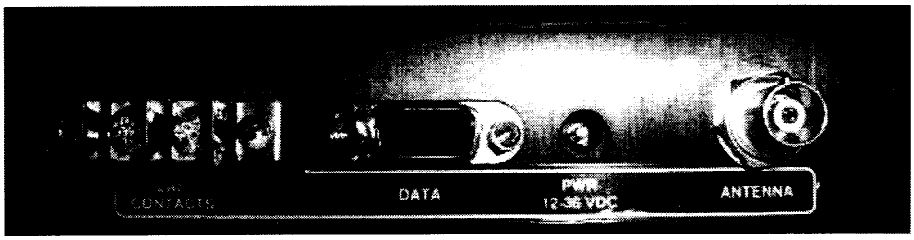


TEN WHEEL APPLICATION (K10S)

Run Safe™
System Components and Accessories

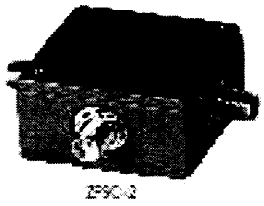


Front View of Receiver Display Unit

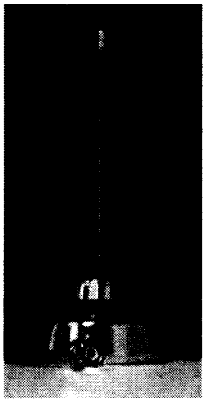


Rear View of Receiver Display Unit

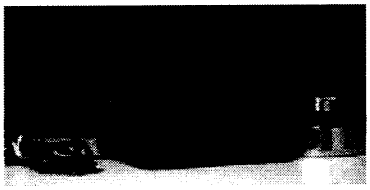
Sensor mounted on Valve Stem



Power Splitter



Mag Mount Antenna



Repeater Unit

Special Antenna and Bracket

Run Safe™ System Installation and Operation

The Standard ***Run Safe™ System*** comes with a Receiver Display Unit, power cord, antenna, coaxial cable and a number of tire sensors. Depending upon the application and the size Kit, the unit may also include a Power Splitter and second antenna.

We currently have two types of antenna available. The standard antenna is a mag-mount antenna with 12 feet of coaxial cable. The special antenna assembly includes the antenna whip, NMO, 17 feet of coaxial cable and a frame mount antenna bracket and screw clamps.

To start your installation, locate a place for the Receiver Display unit in sight of the driver. Wire the power cord into the vehicle electrical system. **Note:** ***Power should be supplied at all times to the Receiver Display unit. This allows continuos monitoring of the sensors. The Receiver Display unit will shut down if the vehicle's system voltage drops to 10 volts.***

Next, the antenna should be installed. Locate a position on the frame rail near the center of the vehicle and attach the antenna with the ***whip pointing down***. Run the coaxial cable from the antenna to the rear of the receiving display unit and connect to the BNC connector. **Note:** ***If your Kit includes a Power Splitter, you should run the coaxial cable from the Power Splitter to the receiver display unit. Then connect the two antenna cables to the power splitter. The Power Splitter has three BNC connections. The "S" is the connection for the cable going to the Receiver Display unit. "1" and "2" are the connections for the antenna cables.***

If your Receiver Display unit was pre-programmed, follow the template provided and labels on the Sensors and mount the Sensors on the valve stems for each tire. **Note:** ***You should check the tire pressure before mounting the Sensor. This will assure that you start operating at the manufacturer recommended psi. The Sensor will memorize the pressure and report the "learned pressure" to the Receiver Display unit.***

To set-up the Receiver Display to receive and decode transmissions from the Sensors, you must enter the four digit code of each Sensor into the system memory. This allows the system to only recognize those Sensor IDs stored in memory and provide accumulation of the history information for those Sensors.

To start the program, press the "MODE" and "UP" buttons at the same time. "PRG" will appear on the display screen. Press the "YES" button to start. Press the "MODE" button to advance to next field.

- Set the date - "set date" will appear on display screen. Use the Mode button to move from field to field entering the date. The "UP" and "DOWN buttons will change the date value.

- Set the time - "set clo" will appear on display screen. The time is based on the military method of time. Use the Mode button to move from field to field entering the time. The "UP" and "DOWN buttons will change the value.

- Enter sensor ID's - "Set ids" will appear on display screen.

a.) Press "YES" to see first channel "CXX" (tire location channel numbers 00-99) and "XXXX" for entry of four digit sensor code. Press "MODE" to advance to next field.

b.) Press "MODE" to go to "XXXXX" the five digit alphanumeric field for LOCATION ID/ code of your choice. This location code will be displayed when the sensor transmits a message. Suggested codes: L1 = Left Front, R1 = Right Front, etc.

Run Safe™ System Installation and Operation (continued)

c.) Operator will press "UP" or "DOWN" button to increment through channels. Continue entering sensor codes until all sensors are entered.

- After entering all of the sensor information, press "MODE" to enter the "Operate" mode. Note: The system will automatically enter operate mode after 60 seconds.

In "Operate" mode the Receiver Display will listen for and decode transmissions from the Sensors. The system will verify the transmission is from a Sensor listed in the ID table. The Receiver Display will update the History file and display the message on the display screen. e.g. LO_P, HI_P, LO Battery, A-OK.

NOTE: ***The Receiver Display Unit will report a fault 5 times on the display screen. In the event you do not see the fault report, the display panel will blink with a row of dots until the fault is corrected.***

- This function provides you with two levels of reporting faults to increase your awareness to a fault and the need to correct the problem.
- System operating normally when the dot scrolls across the display.

Other Operations of Receiver Display

Last Scan Mode

Press the "MODE" button and then the "UP" or "DOWN" button until "Last Scan" appears on the display. Using the "UP" button the operator can toggle through the various channels and view the history of transmissions by location code. The mode will display all tire location channels and confirm that you have received a transmission from all sensors during the last twelve hour period.

Alarm Poll Mode

Press the "MODE" button and then the "UP" or "DOWN" button until "Alarm" appears on the display. Using the "UP" button the operator can toggle through the channels reporting faults only.

If a fault is received, remove the sensor from the tire at the fault location, take appropriate action (repair or add air), re-install the sensor on the valve stem. The sensor will memorize the new pressure and the receiver will return to it's operating mode (dot scrolling across display).

Receiver Display - Extra Items:

Data Port (RS 232)

The Data Port (see picture) is used to connect to a PC. This connection allows for programming of the RD as well as downloads of the history file.

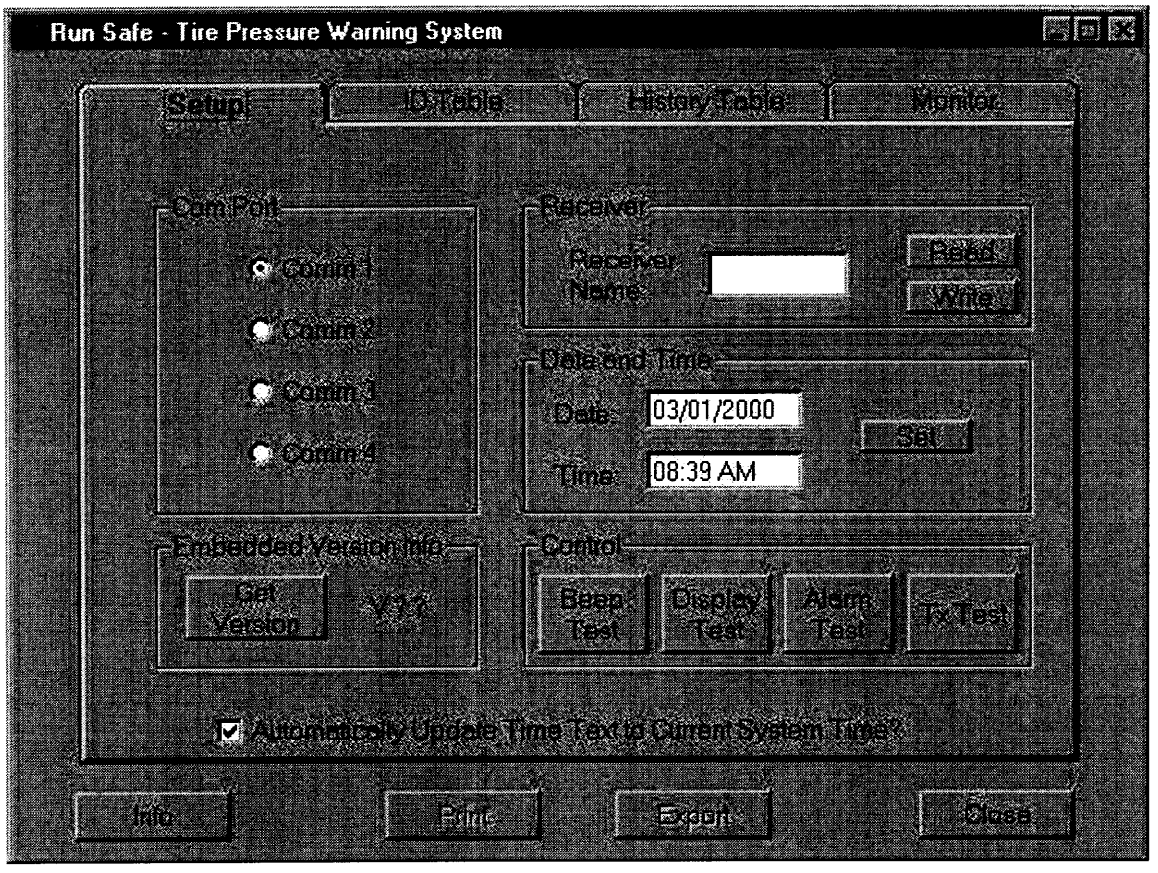
Alarm Contact (Normal Output)

The alarm contact (see picture) is used to connect the RD to a remote alarm or light system. The alarm is activated by the RD receiving a fault message from a sensor. If preferred, this function allows you to use a trouble/indicator light on your dash.

Run Safe™ Software

Sensor Technology International offers the ***Run Safe***™ Software package for easy programming of the ***Run Safe***™ Electronic Tire Pressure Warning System. The software also allows the operator to download the history file to a PC, where the report can be printed.

Fleet managers with several units to install and monitor will appreciate this easy to use program. Installation procedure will go faster! The program also makes it easy to maintain a history file on each unit, allowing for monitoring of the operator and vehicle.



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